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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of:

Redevelopment of Spectrum To
Encourage Innovation in the
Use of New Telecommunications
Technologies

ET Docket No. 92-9

RM-7981

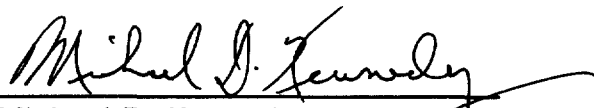
RM-8004

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COMMENTS OF MOTOROLA INC.

Motorola Inc. ("Motorola") hereby submits its comments on the Further Notice of Proposed Rule Making ("*Further Notice*") in the above-captioned proceeding concerning the redevelopment of spectrum in the 2 GHz band for emerging technologies. In this phase of the "*Emerging Technologies*" proceeding, the Commission addresses the rechannelization of five microwave bands above 3 GHz to ensure that suitable alternative microwave spectrum is available to reaccommodate existing 2 GHz users. Motorola strongly supports the thrust of this action and urges a swift resolution to the pending issues in order to facilitate the timely introduction of personal communications services ("PCS") and other emerging technologies in the 2 GHz band.

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EXECUTIVE SUMMARY

- **THE COMMISSION MUST QUICKLY ADOPT RULES IN THIS PROCEEDING THAT PERMIT THE PROMPT AND EFFICIENT REACCOMMODATION OF 2 GHZ FIXED MICROWAVE LICENSEES TO ALTERNATIVE BANDS.**
- **ANY MICROWAVE CHANNELING PLAN ULTIMATELY ADOPTED BY THE COMMISSION SHOULD CONSIDER BOTH USER NEEDS AND SPECTRUM EFFICIENCY AS THE HIGHEST PRIORITIES.**
- **THE COMMISSION SHOULD EXPEDITE THE REACCOMMODATION PROCESS THROUGH SOME FORM OF "INSTANT" OR TEMPORARY MICROWAVE LICENSING.**
- **THE COMMISSION SHOULD IMMEDIATELY ADOPT A LIBERAL WAIVER POLICY DURING THE PENDENCY OF THIS RULEMAKING TO ASSIST BOTH EXISTING LICENSEES AND NEW APPLICANTS TO ACCOMMODATE THEIR MICROWAVE NEEDS IN BANDS ABOVE 3 GHZ.**
- **THE COMMISSION SHOULD NOT DELAY THIS PROCEEDING WHILE IT CONTINUES TO SEEK ACCESS TO THE 1710-1850 MHZ GOVERNMENT BAND.**

I. INTRODUCTION

The Commission's *Further Notice* is intended to ensure that alternative frequencies are available to 2 GHz licensees that are suitable for providing equivalent service with comparable reliability.¹ Motorola supports this goal because it will simplify and thus expedite the relocation negotiation process between providers of new and emerging technologies -- such as personal communications services ("PCS") -- and existing 2 GHz microwave users. The timely introduction of PCS to the American consumer will provide for a host of new communications services and advanced forms of portable wireless coverage, including vehicular and pedestrian services, portable facsimile services, wireless PBXs, and wireless data applications. In addition, such services will allow the U.S. to maintain its leadership role in the global market for wireless telecommunications products and services. Motorola therefore believes that it is essential for the Commission to expedite the microwave reaccommodation process needed to permit prompt implementation of PCS and other emerging mobile technologies. In this regard, Motorola recommends in these comments several administrative steps to speed reaccommodation of microwave users.

¹ *Further Notice* at ¶2.

II. THE COMMISSION SHOULD MOVE SWIFTLY TO RECHANNEL THE FIXED MICROWAVE BANDS ABOVE 3 GHZ

By its swift response to the petitions for rule making filed by the Utilities Telecommunications Council ("UTC") and Alcatel Network Systems, Inc., ("Alcatel"),² the Commission has taken another important step forward in providing fixed microwave users a reliable alternative home to help make way for initial new emerging mobile technologies and services. Specifically, the *Further Notice* proposes new channeling plans and other technical rule changes pertaining to the common carrier microwave bands at 4, 6, and 11 GHz as well as to the private microwave band at 6 GHz. Also, the Commission proposes to reallocate and rechannel the 10 GHz point-to-multipoint frequency band for point-to-point operations. Finally, the Commission proposes to allocate each of these bands to both common carrier and private microwave users on a co-primary basis.

In general, Motorola supports the Commission's proposed rechannelization approach because it appears to balance the varying spectrum needs of the microwave user community while maintaining spectrum efficiency. In particular, the Commission's proposals would create channels of various bandwidths in an overlaid fashion to accommodate low, medium, and high capacity systems within each band. Such a plan provides the flexibility to match the spectrum

² RM-7981 and RM-8004, respectively.

licensed to the user's individual needs. This approach in turn generally should allow more microwave users to occupy each band and provides for an efficient and effective frequency coordination process. A similar licensing plan already is in place in the 18 GHz fixed microwave band, and it has fostered effective sharing of that spectrum by large numbers of microwave licensees with varying needs.

Motorola expects that the opening round of comments will offer for consideration alternative channeling schemes that specify different channelwidths than those set out in the *Further Notice*. To the extent that these alternative proposals provide similar flexibility while ensuring spectrum efficiency, Motorola believes that such recommendations should be seriously considered. In choosing a specific plan, the Commission should give special weight to recommendations that accommodate the needs of fixed users and match the channelwidth to the actual capacity needed.

Motorola's prime concern in this matter is the speedy adoption of rules in this proceeding that expedite the reaccommodation of existing 2 GHz microwave users. Therefore, Motorola recommends that the Commission not allow any ultimate changes in the specific channeling plan to delay the sound approach set forth in the *Further Notice*.

Motorola recognizes, however, that even if these proposals are quickly adopted, the reaccommodation process still promises to be lengthy and arduous.

For example, even with adequate spectrum alternatives for the 2 GHz microwave user and assuming that any compensation matters have been quickly negotiated between the microwave licensee and the emerging technology service provider, over a year could easily elapse before the microwave facility is operational in the alternative frequency bands.

In this vein, Motorola points out that, before a microwave station can begin to operate, the microwave engineer must design the system's path requirements, gain access to transmitter and receiver sites, settle any zoning issues, coordinate adjacent channel and co-channel usage, resolve any potential interference concerns, and then file for an FCC license. Once the license is issued, the licensee can then undertake construction of the facility. This entire process could take up to 12 to 15 months before the facility is up and operational and the 2 GHz spectrum is released for actual use by the emerging technologies.

Motorola is concerned that these time frames will adversely affect the timely introduction of PCS and other emerging technologies in the 2 GHz band. They will most certainly affect the timing of reaccommodating existing microwave licensees. To that end, Motorola urges the Commission to explore rule changes that facilitate rapid relocation and construction of 2 GHz microwave links.

In the private land mobile services, applicants for certain land mobile stations are permitted to begin construction and commence operation immediately upon the filing of the appropriate FCC application form where the proposed operation has been successfully coordinated by the Commission's recognized frequency coordinators.³ This policy reflects the FCC's belief that there is little likelihood of harmful interference from the operation of a properly coordinated application and that the public interest is served by the immediate operation of the proposed station.⁴ Motorola urges the Commission to consider whether similar policies are appropriate for microwave operations, at least in the context of accommodating relocated 2 GHz users.

Motorola notes that the FCC has previously received two separate petitions for rule making that address the ability of an applicant for a fixed microwave station to pre-construct and operate its applied-for station prior to the issuance of the license.⁵ Motorola urges the Commission to reassess the feasibility of implementing some method of instant or temporary licensing which

³ See 47 C.F.R. § 90.159.

⁴ See Amendment of Part 90 of the Commission's Rules To Implement a Conditional Authorization Procedure for Proposed Private Land Mobile Radio (Report and Order) Service Stations, 4 FCC Rcd 8280 (1989).

⁵ Digital Microwave Corporation ("DMC") Petition for Rulemaking, RM-6909 (filed May 1, 1989) and McCaw Cellular Communications, Inc. ("McCaw") Petition for Rulemaking, RM-7861 (filed Oct. 16, 1991). The DMC petition, concerning Part 94 operations, was dismissed in light of Private Radio Bureau staff concerns about the number of private microwave applications returned to correct errors. See Letter from Richard J. Shibben, Chief, Land Mobile and Microwave Division, Private Radio Bureau, to Leonard Robert Raish, Esq. (March 22, 1991). The McCaw petition concerning Part 21 operations remains pending.

could help reduce the cycle time in making 2 GHz spectrum available for emerging technology services. When viewed in the light of expediting the implementation of emerging technologies such as PCS, the public interest of such an approach may far outweigh any potential minimal problems with ensuring the integrity of the microwave licensing process.

III. THE COMMISSION SHOULD ADOPT A LIBERAL WAIVER POLICY DURING THE PENDENCY OF THIS PROCEEDING

Successful implementation of PCS services in the 2 GHz band is ultimately dependent upon PCS licensees gaining access to clear spectrum. As further detailed in Motorola's comments in Gen Docket No. 90-314, although PCS licensees may be able to initiate service in the shared environment, large blocks of clear spectrum eventually will be required to fulfill demand.

While Motorola recognizes that the Commission has responded in a timely fashion to the issues raised in this instant proceeding, it remains concerned that certain 2 GHz microwave users may be disadvantaged or discouraged during the pendency of this instant rulemaking from relocating to alternative frequency bands. Users may voluntarily choose to locate new links in higher bands now if allowed to do so. For example, Part 21 mandates certain minimum loading criteria for 6 GHz facilities that are not applicable for 2 GHz links.⁶ Many

⁶ 47 C.F.R. § 21.710.

smaller carriers may find it difficult to meet these loading requirements, rendering 6 GHz an unattainable solution during the pendency of this rulemaking.

Motorola urges the Commission to announce a liberal waiver policy applicable to the frequency bands under consideration in the instant *Further Notice*. The Commission could apply this policy for all existing licensees in the 1850-2200 MHz band who demonstrate that the existing 2 GHz facilities would be decommissioned upon authorization and construction of the proposed facility in any of the bands that are the subject of this rule making proposal. The waiver policy should extend to technical standards that otherwise would discourage the use of the alternative frequency bands, as well as to eligibility requirements.⁷

IV. THE COMMISSION SHOULD CONTINUE ITS NEGOTIATIONS TO SECURE NON-GOVERNMENT ACCESS TO THE 1710-1850 GOVERNMENT BAND BUT THOSE DISCUSSIONS SHOULD NOT DELAY ACTION IN THIS PROCEEDING

Motorola supports the Commission's tentative decision not to delay moving forward on these proposals while it continues to negotiate non-government access to the 1710-1850 MHz band.⁸ Motorola agrees with the Commission and others that the vast majority of existing 2 GHz microwave

⁷ The Commission has already indicated a willingness to waive its eligibility criteria in order to permit access to alternative fixed microwave bands. *Notice of Proposed Rule Making*, ET Docket No. 92-9, 7 FCC Rcd 1542 (1992).

⁸ *Further Notice* at ¶24.

systems can be accommodated in existing non-government microwave allocations.

Nonetheless, Motorola recognizes that the 1710-1850 MHz Government band could be used in limited instances to relocate certain classes of 2 GHz licensees that otherwise would prove technically or economically challenging to move to higher frequencies. To the extent that negotiations with NTIA do not detract from the Commission's ability to resolve this proceeding in a timely fashion, those discussions should proceed. However, as evidenced by previous Comsearch studies, even users in congested microwave markets such as Houston should be adequately reaccommodated by the steps proposed in the instant *Further Notice*.

V. CONCLUSION

Motorola supports a prompt resolution to this proceeding so that the orderly relocation of 2 GHz microwave users can commence. In this regard, Motorola supports rechannelizing the alternative frequency bands in a manner that provides users with flexibility while ensuring that spectrum is used efficiently. Also, Motorola urges the Commission to consider methods of reducing the regulatory delays associated with reaccommodating 2 GHz microwave users to alternative frequencies. Through these actions, the Commission will further the public interest by facilitating the introduction of

emerging technologies such as PCS service to the American public at the earliest possible date.